

U.S. Appln. No. 10/681,073
Reply to Office Action dated January 31, 2006

PATENT
450134-04839

AMENDMENTS TO THE CLAIMS

Claims 1-10. (Canceled)

Claim 11. (previously presented) A heat dissipating structure for an electronic device, comprising:
a heat source;
a heat dissipating member having an inner wall, outer wall, and partition walls, wherein
the inner wall directly or indirectly receives heat from the heat source,
the outer wall opposes the inner wall at a distance,
the partition walls connect the inner wall and the outer wall,
the inner wall, outer wall and partition walls define a plurality of through-holes,
the through-holes are arranged along at least one of the inner wall and the outer wall,
each of the through-holes extending in a vertical direction within a tilt range in
which gravitational influence is utilizable, and top and bottom ends of each of the
through-holes open to the outside; and
a case, which houses the heat source and the heat dissipating member,
wherein an outer side of the outer wall of the heat dissipating member is in surface
contact with an inner side of the case.

Claim 12. (currently amended) The heat dissipating structure according to claim 11, wherein
the inner wall of the heat dissipating member defines an enclosed space, and
the heat source is placed within the enclosed space.

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Claim 13. (currently amended) The heat dissipating structure according to claim 11, wherein an outer side of the heat dissipating member has a cooling fin.

Claim 14. (new) The heat dissipating structure according to claim 11, wherein the plurality of through-holes have approximately the same shape, and are lined up along at least one of the inner wall and the outer wall at regular intervals.

Claim 15. (new) The heat dissipating structure according to claim 11, wherein a tilt of each of the through-holes is within 60° to a plumb line.

Claim 16. (new) The heat dissipating structure according to claim 11, wherein a cross-sectional shape of each of the through-holes that is orthogonal to the vertical direction is approximately the same at arbitrary vertical positions.

Claim 17. (new) The heat dissipating structure according to claim 11, wherein an optimum distance between opposing inner sides of two adjacent partition walls is set in accordance with a linear function of vertical length of the through-holes, and a distance between the opposing inner sides is set based upon the optimum distance.

Claim 18. (new) The heat dissipating structure according to claim 17, wherein assuming the optimum distance between the opposing inner sides is w_{opt} , the vertical length of the through-hole is L , and the distance between the opposing inner sides is w , w_{opt} is set

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according to the following equation

$$w_{opt} = 0.01 L + 0.005$$

and w is set within the range of

$$0.95 w_{opt} \leq w \leq 1.2 w_{opt}$$

Claim 19. (new) The heat dissipating structure according to claim 11, further comprising:
a heat diffusing member, which is positioned between the heat source and the inner wall
of the heat dissipating member, and is in contact with the heat source and an outer side of the
inner wall.

Claim 20. (new) The heat dissipating structure according to claim 11, wherein
a cross-section that is vertically orthogonal to the through-hole is approximately a square
shape, and
lengths of four sides of the cross-section of the through-hole are set almost equal.

Claim 21. (new) The heat dissipating structure according to claim 11, wherein
the through-holes are approximately lined up linearly.

Claim 22. (new) The heat dissipating structure according to claim 11, wherein
the through-holes are lined up in a circle.